

WHAT IS CLAIMED IS:

1. A method for processing poultry, comprising the steps of:  
supplying live poultry;  
stunning the live poultry in a stunning device;  
placing the stunned poultry into product carriers advanced along a conveyor;  
killing the stunned poultry; and  
removing the feathers from the dead poultry in a plucking device,  
further comprising the exposure of the poultry, downstream of the plucking device, to an electrical stimulation for at least a first stimulation period.
2. The method of claim 1, wherein an electric voltage is applied across the carcass of the poultry, or at least across a part thereof, by the carcass being dragged by the head through a bath connected to a power source and containing an aqueous solution, the legs of the carcass being earthed via the product carrier.
3. The method of claim 1, wherein an electric voltage is applied across the carcass of the poultry, or at least across a part thereof, electrical contact occurring at the location of the breast of the carcass.
4. The method of claim 3, wherein the carcass is led by the breast over an electrode connected to a power source.
5. The method of claim 3, wherein the carcass is led by the breast over an electrically conductive rail connected to a power source.
6. The method of claim 3, wherein the legs of the carcass are earthed via the product carrier.
7. The method of claim 5, comprising the application of a force to the carcass in the direction of the rail.
8. The method of claim 7, wherein the carcass, at least whilst it is being led along the rail, has an oblique position substantially at right angles to its direction of motion.
9. The method of claim 1, comprising at least a first, zero-voltage rest period after the first stimulation period and a second stimulation period after the first rest period, during which second stimulation period the poultry is exposed to an

electrical stimulation in which an electric voltage is applied across the carcass of the poultry, or at least across a part thereof.

10. The method of claim 9, wherein the carcass, during the first stimulation period and the second stimulation period, is exposed to a pulsating alternating voltage.

11. The method of claim 9, wherein the first stimulation period and the second stimulation period have a duration of between 30 and 180 seconds.

12. The method of claim 11, wherein the first stimulation period and the second stimulation period have a duration of between 60 and 120 seconds.

13. The method of claim 12, wherein the first stimulation period and the second stimulation period have a duration of 90 seconds.

14. The method of claim 9, wherein the first rest period has a length of between 15 and 45 seconds.

15. The method of claim 14, wherein the first rest period has a length of 30 seconds.

16. The method of claim 2, wherein the electric voltage lies within the range 50 V to 250 V.

17. The method of claim 16, wherein the electric voltage amounts to 100 V.

18. The method of claim 2, wherein the electric voltage has a frequency within the range 10 Hz to 1 kHz.

19. The method of claim 18, wherein the electric voltage has a frequency of 50 Hz.

20. The method of claim 2, wherein the voltage has a voltage pulse over a pulse time of about 0.5 second and a zero-voltage period with a duration of about 1 second.

21. The method of claim 1, comprising the step of exposing the poultry to a second electrical stimulation downstream of the plucking device.

22. The method of claim 21, wherein the second electrical stimulation takes place 50 seconds post-mortem.

23. The method of claim 1, comprising the step of deboning the poultry after at least the first stimulation period following the expiry of a waiting period.

24. The method of claim 23, comprising the step of cooling the

poultry, after at least the first stimulation period, during the waiting period.

25. The method of claim 23, comprising the step of measuring elementary parameters, related to the maturing process, during transport of the poultry along the conveyor.

26. The method of claim 25, further comprising the step of measuring the progress of the maturing process during transport of the poultry along the conveyor.

27. The method of claim 25, characterized by the measurement of the behaviour pattern of the pH-value and/or R-value of the poultry over the waiting period.

28. The method of claim 1, wherein a thin film of water is provided at the place where the electric voltage is applied.

29. The method of claim 1, further comprising the step of controlling process parameters, especially the time and duration of the execution of working steps in a process of mechanized working of slaughtered animals, especially poultry, wherein the tenderness of a specified meat portion is evaluated prior to a due processing step and, after this evaluation, the important process parameters for the particular processing step are set to an optimal value.

30. The method of claim 29, the slaughtered animals being birds, wherein the breast meat is chosen as the meat portion to be evaluated.

31. The method of claim 29, wherein the evaluation is carried out prior to and/or after expiry of the electrical stimulation.

32. The method of claim 29, wherein the evaluation is carried out either prior to, or during, or after the deboning.

33. The method of claim 29, wherein the method is implemented either prior to, or during, or after the cooling.

34. The method of claim 29, wherein, on the basis of the evaluation of the meat portion, a measurement value is determined by means of a regression analysis and/or via a neural network.

35. The method of claim 29, wherein the tenderness of a meat specimen is determined by measuring the respective diffuse reflection coefficients of this specimen for radiation with different specified wavelengths in the visible and near-infrared zone, by comparing the measurement values thus obtained with

those obtained from a similar determination carried out on specimens having a known tenderness measure and by deriving therefrom a variable which characterizes the tenderness in question.

36. Method for evaluating the tenderness of a meat part of a slaughtered animal, in particular poultry, wherein the meat part is subjected to a concentrated blast, of predetermined duration and intensity, of a flowing medium, the evolution of the resultant surface deformation in the meat being closely observed, the measurement values thus obtained are compared with those obtained from a similar determination carried out on specimens of known tenderness and, from this comparison, a variable is derived characterizing the tenderness in question.

37. The method of claim 36, wherein air is used as the working medium.

38. The method of claim 35, wherein a definitive measurement variable, representing tenderness, is obtained by combining a number of determinations comprising:

measuring the respective diffuse reflection coefficients of this specimen for radiation with different specified wavelengths in the visible and near-infrared zone, by comparing the measurement values thus obtained with those obtained from a similar determination carried out on specimens having a known tenderness measure and by deriving therefrom a variable which characterizes the tenderness in question,  
with at least one determination comprising:

subjecting the meat part to a concentrated blast, of predetermined duration and intensity, of a flowing medium, the evolution of the resultant surface deformation in the meat being closely observed, the measurement values thus obtained are compared with those obtained from a similar determination carried out on specimens of known tenderness and, from this comparison, a variable is derived characterizing the tenderness in question.

39. The method of claim 38, wherein measurement variables are regularly determined of new meat specimens of known tenderness,

wherein the tenderness of a meat specimen is determined by measuring the respective diffuse reflection coefficients of this specimen for radiation with different specified wavelengths in

the visible and near-infrared zone, by comparing the measurement values thus obtained with those obtained from a similar determination carried out on specimens having a known tenderness measure and by deriving therefrom a variable which characterizes the tenderness in question, and

wherein the meat part is subjected to a concentrated blast, of predetermined duration and intensity, of a flowing medium, the evolution of the resultant surface deformation in the meat being closely observed, the measurement values thus obtained are compared with those obtained from a similar determination carried out on specimens of known tenderness and, from this comparison, a variable is derived characterizing the tenderness in question,

and a databank is thus created in which the correlation is established between the results of the determinations and the tenderness experienced in practice.

40. The method of claim 38, further comprising:

comparing the respective measurement results obtained from conducted evaluations with those obtained from previously conducted determinations, and for delivering, on the basis thereof, a measurement value representing the tenderness.

41. The method of claim 39, further comprising:

comparing the respective measurement results obtained from conducted evaluations with those obtained from previously conducted determinations, and for delivering, on the basis thereof, a measurement value representing the tenderness.

42. A device for evaluating the tenderness of a meat part of a slaughtered animal, comprising a nozzle for the targeted and controlled discharge of a blast of current of a medium, a detection device, interacting therewith, for delivering an electrical output signal representing the behaviour pattern of the impression formed in the meat to be evaluated, and a processing circuit for sampling characterizing parts of the detection signal obtained.

43. The device of claim 40, wherein the processing circuit is set up to analyze the initial formation, the maximum size and the relaxation of signal parts representing the impression to be evaluated.